Raji Atchudan

List of Publications by Year
in descending order

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118 papers	7,348 citations	46918 47 h-index	60497 81 g-index
118 all docs	118 docs citations	118 times ranked	5595 citing authors

#	Article	IF	Citations
1	Highly fluorescent nitrogen-doped carbon dots derived from Phyllanthus acidus utilized as a fluorescent probe for label-free selective detection of Fe3+ ions, live cell imaging and fluorescent ink. Biosensors and Bioelectronics, 2018, 99, 303-311.	5.3	537
2	Facile green synthesis of nitrogen-doped carbon dots using Chionanthus retusus fruit extract and investigation of their suitability for metal ion sensing and biological applications. Sensors and Actuators B: Chemical, 2017, 246, 497-509.	4.0	301
3	Hydrophilic nitrogen-doped carbon dots from biowaste using dwarf banana peel for environmental and biological applications. Fuel, 2020, 275, 117821.	3.4	273
4	Turn-off fluorescence sensor for the detection of ferric ion in water using green synthesized N-doped carbon dots and its bio-imaging. Journal of Photochemistry and Photobiology B: Biology, 2016, 158, 235-242.	1.7	271
5	Nitrogen-doped carbon dots originating from unripe peach for fluorescent bioimaging and electrocatalytic oxygen reduction reaction. Journal of Colloid and Interface Science, 2016, 482, 8-18.	5.0	268
6	Microwave assisted green synthesis of fluorescent N-doped carbon dots: Cytotoxicity and bio-imaging applications. Journal of Photochemistry and Photobiology B: Biology, 2016, 161, 154-161.	1.7	261
7	Facile synthesis of zinc oxide nanoparticles decorated graphene oxide composite via simple solvothermal route and their photocatalytic activity on methylene blue degradation. Journal of Photochemistry and Photobiology B: Biology, 2016, 162, 500-510.	1.7	203
8	Efficient synthesis of highly fluorescent nitrogen-doped carbon dots for cell imaging using unripe fruit extract of Prunus mume. Applied Surface Science, 2016, 384, 432-441.	3.1	177
9	Betel-derived nitrogen-doped multicolor carbon dots for environmental and biological applications. Journal of Molecular Liquids, 2019, 296, 111817.	2.3	161
10	Sustainable synthesis of carbon quantum dots from banana peel waste using hydrothermal process for in vivo bioimaging. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114417.	1.3	158
11	Green synthesis of nitrogen-doped graphitic carbon sheets with use of Prunus persica for supercapacitor applications. Applied Surface Science, 2017, 393, 276-286.	3.1	146
12	Reductive-degradation of carcinogenic azo dyes using Anacardium occidentale testa derived silver nanoparticles. Journal of Photochemistry and Photobiology B: Biology, 2016, 162, 604-610.	1.7	143
13	Hydrothermal conversion of Magnolia liliiflora into nitrogen-doped carbon dots as an effective turn-off fluorescence sensing, multi-colour cell imaging and fluorescent ink. Colloids and Surfaces B: Biointerfaces, 2018, 169, 321-328.	2.5	134
14	Caulerpa racemosa: a marine green alga for eco-friendly synthesis of silver nanoparticles and its catalytic degradation of methylene blue. Bioprocess and Biosystems Engineering, 2016, 39, 1401-1408.	1.7	126
15	Effective photocatalytic degradation of anthropogenic dyes using graphene oxide grafting titanium dioxide nanoparticles under UV-light irradiation. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 333, 92-104.	2.0	123
16	An ultrasensitive photoelectrochemical biosensor for glucose based on bio-derived nitrogen-doped carbon sheets wrapped titanium dioxide nanoparticles. Biosensors and Bioelectronics, 2019, 126, 160-169.	5.3	121
17	In-situ green synthesis of nitrogen-doped carbon dots for bioimaging and TiO2 nanoparticles@nitrogen-doped carbon composite for photocatalytic degradation of organic pollutants. Journal of Alloys and Compounds, 2018, 766, 12-24.	2.8	120
18	Concurrent synthesis of nitrogen-doped carbon dots for cell imaging and ZnO@nitrogen-doped carbon sheets for photocatalytic degradation of methylene blue. Journal of Photochemistry and Photobiology A: Chemistry, 2018, 350, 75-85.	2.0	114

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19	Utilization of waste biomass of Poa pratensis for green synthesis of n-doped carbon dots and its application in detection of Mn2+ and Fe3+. Chemosphere, 2022, 286, 131764.	4.2	114
20	Green synthesized multiple fluorescent nitrogen-doped carbon quantum dots as an efficient label-free optical nanoprobe for in vivo live-cell imaging. Journal of Photochemistry and Photobiology A: Chemistry, 2019, 372, 99-107.	2.0	112
21	A review on porous carbon electrode material derived from hypercross-linked polymers for supercapacitor applications. Journal of Energy Storage, 2020, 32, 101831.	3.9	102
22	Facile synthesis of carbon encapsulated RuO2 nanorods for supercapacitor and electrocatalytic hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 2323-2329.	3.8	98
23	High-performance glucose biosensor based on green synthesized zinc oxide nanoparticle embedded nitrogen-doped carbon sheet. Journal of Electroanalytical Chemistry, 2018, 816, 195-204.	1.9	97
24	Direct solvothermal synthesis of zinc oxide nanoparticle decorated graphene oxide nanocomposite for efficient photodegradation of azo-dyes. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 337, 100-111.	2.0	87
25	Green synthesized N-doped graphitic carbon sheets coated carbon cloth as efficient metal free electrocatalyst for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2017, 42, 14390-14399.	3.8	82
26	Chitin and chitosan based biopolymer derived electrode materials for supercapacitor applications: A critical review. Journal of Industrial and Engineering Chemistry, 2021, 104, 155-171.	2.9	82
27	Synthesis of various dimensional metal organic frameworks (MOFs) and their hybrid composites for emerging applications â€“ A review. Chemosphere, 2022, 298, 134184.	4.2	82
28	Tunable fluorescent carbon dots from biowaste as fluorescence ink and imaging human normal and cancer cells. Environmental Research, 2022, 204, 112365.	3.7	78
29	Indian Gooseberry-Derived Tunable Fluorescent Carbon Dots as a Promise for In Vitro/In Vivo Multicolor Bioimaging and Fluorescent Ink. ACS Omega, 2018, 3, 17590-17601.	1.6	76
30	Electrochemical Detection of H₂O₂Using an Activated Glassy Carbon Electrode. , 2022, 1, 034401.		73
31	Supercapacitor performance of carbon supported Co3O4 nanoparticles synthesized using Terminalia chebula fruit. Journal of the Taiwan Institute of Chemical Engineers, 2016, 68, 489-495.	2.7	72
32	Facile synthesis of a novel nitrogen-doped carbon dot adorned zinc oxide composite for photodegradation of methylene blue. Dalton Transactions, 2020, 49, 17725-17736.	1.6	70
33	Catalytic degradation of organic dyes using green synthesized N-doped carbon supported silver nanoparticles. Fuel, 2020, 280, 118682.	3.4	67
34	A Review of Polymeric Micelles and Their Applications. Polymers, 2022, 14, 2510.	2.0	65
35	Spherical Chitosan/Gelatin Hydrogel Particles for Removal of Multiple Heavy Metal Ions from Wastewater. Industrial & Engineering Chemistry Research, 2019, 58, 9900-9907.	1.8	64
36	Sustainable synthesis of multifunctional carbon dots using biomass and their applications: A mini-review. Journal of Environmental Chemical Engineering, 2021, 9, 105802.	3.3	61

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37	Direct growth of iron oxide nanoparticles filled multi-walled carbon nanotube via chemical vapour deposition method as high-performance supercapacitors. International Journal of Hydrogen Energy, 2019, 44, 2349-2360.	3.8	60
38	Synthesis and characterization of graphitic mesoporous carbon using metalâ€“metal oxide by chemical vapor deposition method. Microporous and Mesoporous Materials, 2015, 215, 123-132.	2.2	59
39	Highly graphitic carbon nanosheets synthesized over tailored mesoporous molecular sieves using acetylene by chemical vapor deposition method. RSC Advances, 2015, 5, 93364-93373.	1.7	59
40	Effects of Nanofillers on the Thermo-Mechanical Properties and Chemical Resistivity of Epoxy Nanocomposites. Journal of Nanoscience and Nanotechnology, 2015, 15, 4255-4267.	0.9	59
41	Leftover Kiwi Fruit Peel-Derived Carbon Dots as a Highly Selective Fluorescent Sensor for Detection of Ferric Ion. Chemosensors, 2021, 9, 166.	1.8	54
42	Green synthesis of nitrogen-doped carbon nanograss for supercapacitors. Journal of the Taiwan Institute of Chemical Engineers, 2019, 102, 475-486.	2.7	53
43	Fabrication of ZnO nanoparticles adorned nitrogen-doped carbon balls and their application in photodegradation of organic dyes. Scientific Reports, 2019, 9, 19509.	1.6	53
44	Synthesis of multilayer graphene balls on mesoporous Co-MCM-41 molecular sieves by chemical vapour deposition method. Microporous and Mesoporous Materials, 2013, 175, 161-169.	2.2	52
45	Polybenzoxazine originated N-doped mesoporous carbon ropes as an electrode material for high-performance supercapacitors. Journal of Alloys and Compounds, 2018, 750, 384-391.	2.8	52
46	Biowaste-originated heteroatom-doped porous carbonaceous material for electrochemical energy storage application. Journal of Industrial and Engineering Chemistry, 2021, 98, 308-317.	2.9	51
47	Electrocatalytic and energy storage performance of bio-derived sulphur-nitrogen-doped carbon. Journal of Electroanalytical Chemistry, 2019, 833, 357-369.	1.9	50
48	One-pot dual product synthesis of hierarchical Co3O4@N-rGO for supercapacitors, N-GDs for label-free detection of metal ion and bio-imaging applications. Ceramics International, 2018, 44, 2869-2883.	2.3	49
49	Enhanced solubility of guanosine by inclusion complexes with cyclodextrin derivatives: Preparation, characterization, and evaluation. Carbohydrate Polymers, 2019, 224, 115166.	5.1	48
50	Facile synthesis of monodisperse hollow carbon nanospheres using sucrose by carbonization route. Materials Letters, 2016, 166, 145-149.	1.3	47
51	Electro-synthesis of sulfur doped nickel cobalt layered double hydroxide for electrocatalytic hydrogen evolution reaction and supercapacitor applications. Journal of Electroanalytical Chemistry, 2019, 833, 105-112.	1.9	47
52	Optical Sensor for Dissolved Ammonia Through the Green Synthesis of Silver Nanoparticles by Fruit Extract of Terminalia chebula. Journal of Cluster Science, 2016, 27, 683-690.	1.7	45
53	Binder-free electro-synthesis of highly ordered nickel oxide nanoparticles and its electrochemical performance. Electrochimica Acta, 2018, 283, 1609-1617.	2.6	44
54	Simultaneous removal of heavy metal ions using carbon dots-doped hydrogel particles. Chemosphere, 2022, 286, 131760.	4.2	42

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55	Facile synthesis of nitrogen-doped porous carbon materials using waste biomass for energy storage applications. Chemosphere, 2022, 289, 133225.	4.2	40
56	Graphene oxide-embedded chitosan/gelatin hydrogel particles for the adsorptions of multiple heavy metal ions. Journal of Materials Science, 2020, 55, 9354-9363.	1.7	39
57	Novel electrode material derived from porous polymeric organic framework of phloroglucinol and terephthaldehyde for symmetric supercapacitors. Journal of Energy Storage, 2020, 28, 101283.	3.9	39
58	Preparation of 2D Graphene/MXene nanocomposite for the electrochemical determination of hazardous bisphenol A in plastic products. Chemosphere, 2022, 287, 132106.	4.2	39
59	Eco-friendly synthesis of tunable fluorescent carbon nanodots from Malus floribunda for sensors and multicolor bioimaging. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 390, 112336.	2.0	38
60	Novel 13X Zeolite/PANI electrocatalyst for hydrogen and oxygen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 28337-28349.	3.8	38
61	Recent Advancements in Polysulfone Based Membranes for Fuel Cell (PEMFCs, DMFCs and AMFCs) Applications: A Critical Review. Polymers, 2022, 14, 300.	2.0	38
62	An efficient synthesis of graphenated carbon nanotubes over the tailored mesoporous molecular sieves by chemical vapor deposition. Materials Research Bulletin, 2013, 48, 2205-2212.	2.7	37
63	Influence of annealing temperature in nitrogen doped porous carbon balls derived from hypercross-linked polymer of anthracene for supercapacitor applications. Journal of Energy Storage, 2020, 28, 101196.	3.9	36
64	Facile hydrothermal synthesis of nitrogen rich blue fluorescent carbon dots for cell bio-imaging of Candida albicans. Process Biochemistry, 2020, 88, 113-119.	1.8	35
65	A novel binder-free electro-synthesis of hierarchical nickel sulfide nanostructures on nickel foam as a battery-type electrode for hybrid-capacitors. Fuel, 2020, 276, 118077.	3.4	34
66	Growth of ordered multi-walled carbon nanotubes over mesoporous 3D cubic Zn/Fe-KIT-6 molecular sieves and its use in the fabrication of epoxy nanocomposites. Microporous and Mesoporous Materials, 2013, 167, 162-175.	2.2	33
67	Synthesis and characterization of graphenated carbon nanotubes on IONPs using acetylene by chemical vapor deposition method. Physica E: Low-Dimensional Systems and Nanostructures, 2015, 74, 355-362.	1.3	32
68	Electrochemically exfoliated graphene sheets as electrode material for aqueous symmetric supercapacitors. Surface and Coatings Technology, 2021, 416, 127150.	2.2	32
69	Recent Studies on Dispersion of Grapheneâ€“Polymer Composites. Polymers, 2021, 13, 2375.	2.0	32
70	Deep eutectic solvent assisted electrosynthesis of ruthenium nanoparticles on stainless steel mesh for electrocatalytic hydrogen evolution reaction. Fuel, 2021, 297, 120786.	3.4	32
71	Direct synthesis of nitrogen-rich carbon sheets via polybenzoxazine as highly active electrocatalyst for water splitting. International Journal of Hydrogen Energy, 2018, 43, 13266-13275.	3.8	30
72	Electrochemical Sensing of Glucose Using Glucose Oxidase/PEDOT:4-Sulfocalix [4]arene/MXene Composite Modified Electrode. Micromachines, 2022, 13, 304.	1.4	28

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73	Solid Waste-Derived Carbon Fibers-Trapped Nickel Oxide Composite Electrode for Energy Storage Application. Energy & Fuels, 2020, 34, 14958-14967.	2.5	27
74	Direct electro-synthesis of MnO2 nanoparticles over nickel foam from spent alkaline battery cathode and its supercapacitor performance. Journal of the Taiwan Institute of Chemical Engineers, 2019, 97, 414-423.	2.7	26
75	One-pot synthesis of Fe3O4@graphite sheets as electrocatalyst for water electrolysis. Fuel, 2020, 277, 118235.	3.4	26
76	Fabrication of High-Performance Asymmetric Supercapacitor Consists of Nickel Oxide and Activated Carbon (NiO//AC). Catalysts, 2022, 12, 375.	1.6	26
77	A Short Review on Recent Advances of Hydrogel-Based Adsorbents for Heavy Metal Ions. Metals, 2021, 11, 864.	1.0	24
78	Sustainability and antimicrobial assessments of apigenin based polybenzoxazine film. Polymer, 2019, 172, 100-109.	1.8	23
79	The use of bimetallic MCM-41 mesoporous catalysts for the synthesis of MWCNTs by chemical vapor deposition. Journal of Molecular Catalysis A, 2012, 355, 75-84.	4.8	22
80	Zirconium oxide intercalated sodium montmorillonite scaffold as an effective adsorbent for the elimination of phosphate and hexavalent chromium ions. Journal of Environmental Chemical Engineering, 2021, 9, 106053.	3.3	22
81	Sustainable Synthesis of Silver Nanoparticles Using Marine Algae for Catalytic Degradation of Methylene Blue. Catalysts, 2021, 11, 1377.	1.6	22
82	Smartphone-Operated Wireless Chemical Sensors: A Review. Chemosensors, 2022, 10, 55.	1.8	21
83	Facile one-pot synthesis of novel structured IONP@C-HIOP composite as superior electrocatalyst for hydrogen evolution reaction and aqueous waste investigation of bio-imaging applications. Journal of Molecular Liquids, 2018, 268, 343-353.	2.3	20
84	Effect of microwave power irradiation on TiO2 nano-structures and binder free paste screen printed dye sensitized solar cells. Ceramics International, 2019, 45, 4667-4673.	2.3	20
85	Multicolor-emitting carbon dots from Malus floribunda and their interaction with Caenorhabditis elegans. Materials Letters, 2020, 261, 127153.	1.3	19
86	Ultrasonic synthesis, characterization and energy applications of Niâ€“B alloy nanorods. Journal of the Taiwan Institute of Chemical Engineers, 2017, 80, 901-907.	2.7	18
87	Green Synthesis of SnO2 Nanoparticles for Catalytic Degradation of Rhodamine B. Iranian Journal of Science and Technology, Transaction A: Science, 2020, 44, 661-676.	0.7	18
88	Energy and environmental applications of ultrasonically sulfur doped copper-nickel hydroxides with heterostructures. Journal of Alloys and Compounds, 2017, 729, 126-136.	2.8	16
89	Synthetic disposable material derived-carbon supported NiO: Efficient hybrid electrocatalyst for water oxidation process. Fuel, 2021, 294, 120558.	3.4	16
90	N-Doped Mesoporous Carbon Prepared from a Polybenzoxazine Precursor for High Performance Supercapacitors. Polymers, 2021, 13, 2048.	2.0	16

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91	Metal-free nitrogen-rich glassy carbon as an electrocatalyst for hydrogen evolution reaction. Materials Research Bulletin, 2020, 124, 110734.	2.7	15
92	Biocompatible MXene (Ti3C2Tx) Immobilized with Flavin Adenine Dinucleotide as an Electrochemical Transducer for Hydrogen Peroxide Detection in Ovarian Cancer Cell Lines. Micromachines, 2021, 12, 862.	1.4	15
93	Highly Fluorescent Carbon Dots as a Potential Fluorescence Probe for Selective Sensing of Ferric Ions in Aqueous Solution. Chemosensors, 2021, 9, 301.	1.8	15
94	Facile synthesis of novel molybdenum disulfide decorated banana peel porous carbon electrode for hydrogen evolution reaction. Chemosphere, 2022, 307, 135712.	4.2	15
95	Photocatalytic degradation of persistent brilliant green dye in water using CeO2/ZnO nanospheres. Chemical Engineering Research and Design, 2021, 156, 457-464.	2.7	14
96	Morus nigra-derived hydrophilic carbon dots for the highly selective and sensitive detection of ferric ion in aqueous media and human colon cancer cell imaging. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 635, 128073.	2.3	14
97	A Critical Review on Artificial Intelligence for Fuel Cell Diagnosis. Catalysts, 2022, 12, 743.	1.6	14
98	Synthesis of MWCNTs by the decomposition of acetylene over mesoporous Ni/Cr-MCM-41 catalyst and its functionalization. Journal of Porous Materials, 2012, 19, 797-805.	1.3	13
99	Antibacterial and antibiofilm activities of diphyllin against fish pathogens. Microbial Pathogenesis, 2020, 145, 104232.	1.3	13
100	Sustainable Synthesis of N/S-Doped Porous Carbon from Waste-Biomass as Electroactive Material for Energy Harvesting. Catalysts, 2022, 12, 436.	1.6	13
101	Exfoliation and Noncovalent Functionalization of Graphene Surface with Poly-N-Vinyl-2-Pyrrolidone by In Situ Polymerization. Molecules, 2021, 26, 1534.	1.7	12
102	A review on bismuth-based materials for the removal of organic and inorganic pollutants. Chemosphere, 2022, 306, 135521.	4.2	12
103	Synthesis, characterization, and antiproliferative and apoptosis inducing effects of novels-triazine derivatives. New Journal of Chemistry, 2018, 42, 1698-1714.	1.4	11
104	Interaction of Zwitterionic and Ionic Monomers with Graphene Surfaces. Langmuir, 2018, 34, 6737-6747.	1.6	11
105	Pulsed laser rusted stainless steel: a robust electrode material applied for energy storage and generation applications. Sustainable Energy and Fuels, 2020, 4, 1242-1253.	2.5	11
106	Poly[2-(methacryloyloxy)ethyl phosphorylcholine]-Stabilized graphene-iron oxide composites for water splitting. International Journal of Hydrogen Energy, 2021, 46, 10850-10861.	3.8	11
107	Rapid response and highly selective sensing of adenosine based on novel photoluminescent vanadium nanoclusters anchored on MoS2 nanosheets. Sensors and Actuators B: Chemical, 2020, 306, 127581.	4.0	10
108	Betel leaf derived multicolor emitting carbon dots as a fluorescent probe for imaging mouse normal fibroblast and human thyroid cancer cells. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 136, 115010.	1.3	10

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109	Reviewâ€"Recent Trends on the Synthesis and Different Characterization Tools for MXenes and their Emerging Applications. Journal of the Electrochemical Society, 2022, 169, 077501.	1.3	9
110	Synthesis and properties of polytriazoleimide containing anthracene, pyridine and 1, 2, 3â€triazole groups and their nanocomposites with titanium dioxide. Polymer Engineering and Science, 2019, 59, 129-138.	1.5	8
111	Polyanilineâ€"13X zeolite compositeâ€supported platinum electrocatalysts for direct methanol fuel cell applications. Polymer International, 2019, 68, 929-935.	1.6	8
112	Effect of preparation methods on structure and catalytic activity of Ni loaded Ce x Zr1â^'x O2 catalysts for hydrogen production via autothermal reforming of ethane. Research on Chemical Intermediates, 2017, 43, 2817-2837.	1.3	7
113	The synthesis of mechanically stable polybenzoxazine-based porous carbon and its application as high-performance supercapacitor electrodes. New Journal of Chemistry, 2021, 45, 8738-8746.	1.4	7
114	Comparative investigation on antibacterial studies of Oxalis corniculata and silver nanoparticle stabilized graphene surface. Journal of Materials Science, 2022, 57, 11630-11648.	1.7	7
115	Synthesis and Characterization of Monodispersed Spherical Calcium Oxide and Calcium Carbonate Nanoparticles via Simple Pyrolysis. Nanomaterials, 2022, 12, 2424.	1.9	7
116	Facile synthesis of molybdenum disulfide adorned heteroatom-doped porous carbon for energy storage applications. Journal of Nanostructure in Chemistry, 2023, 13, 545-561.	5.3	5
117	Catalytic Influence of Bimetallic Bifunctional Ni-Pd/H-Î² and H-Mordenite Nanoporous Catalysts for Hydroisomerisation of n-Octane. Journal of Cluster Science, 2016, 27, 1109-1129.	1.7	3
118	Controlled Synthesis of Platinum and Silver Nanoparticles Using Multivalent Ligands. Nanomaterials, 2022, 12, 2294.	1.9	1